DNI Clapper's As Delivered Remarks at the 2016 GEOINT Symposium

Remarks as delivered by

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As many of you know, we started this symposium when I was NGA director in 2003. In 2004, the Geospatial Intelligence Foundation took over, and it is really remarkable what USGIF has done to grow this into our nation's largest gathering of intelligence professionals, a terrific celebration of geospatial intelligence, and a great opportunity to share and grow the tradecraft and foster intelligence integration.

The foundation has flourished with many very worthwhile programs, of which this symposium is just one, and one I'm particularly proud of. It puts a tremendous emphasis on our young people, because they are in fact our future. So, thanks to the foundation, and a huge thank you to all the corporate participants, without whom, this event wouldn't happen.

I've had the opportunity to speak at every GEOINT since we started, with the exception of 2006, which occurred right after I got canned as NGA director – probably not a coincidence. [laughter] So I've spoken at GEOINT as NGA Director, USD(I), and now as DNI, and I think this is my sixth time in this capacity. Next year, I plan to be back, but I will be representing the GEOINT needs of the "assisted living community." [laughter]

I just turned 75 this March, which means, not only was I born on Pi Day, 3-14, but also, I was actually around when Archimedes first calculated Pi to six digits. [laughter]

That shouldn't come as a shock to anyone here. Robert maintains that I used to spot Socrates in the weight room. I've always felt, by the way, that it's always very important to respect one's elders, but it's getting harder for me to find any. [laughter]

Setting aside my time in ancient Greece, this spring, I crossed another significant personal landmark: 55 years since I enlisted as a Marine Corps reservist. [applause] Thanks. Semper Fidelis, for the Marines out there.

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So, Robert asked that I fly down this year and share some of what I've learned. Actually, he phrased that as, "You've been around for three-quarters of a Century. You have to have learned something, right?"

I said, yes, one thing I've learned is that you're never too old to learn something stupid. And I told him, I've also learned that – inside the DC beltway – we don't always follow the ancient tribal wisdom that goes, "When you're riding a dead horse, the best strategy is to dismount." [laughter]

He said he'd heard that one, more than once. He said – at this point – he's memorized my entire list of strategies the government tries that are less successful than dismounting from our dead horses. Somewhat sarcastically, he asked if there was any "ancient wisdom" we *did* follow.

So I had my staff do some research, and we found some "proverbs" that actually ring true to the deep truths of our existence as intelligence officers, especially inside the Beltway.

So without further ado, and in no particular order, these are a few "Truisms from the Geezer."

Those who live in glass houses, shouldn't leave their passwords on sticky notes. [laughter]

Every bird is charmed by the sound of his own voice, so when you're on the [Capitol] Hill, keep your opening statement to five minutes or less. [laughter]

A penny saved is a penny earned, and by God we're willing to shut down the government to prove it. [laughter]

Speaking of God: My favorite, since I was AFTAC commander: In God we trust. All others we monitor. [laughter]

It does no good to cry over spilled milk, or sequestration. [laughter]

If everything is running smoothly, it's time for a reorganization. [laughter]

There is no "I" in "stovepipes." Well wait, yes there is. [laughter]

Count on nothing of what you hear, half of what you see, and only three-quarters of your budget request. [laughter]

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He who laughs last is most likely to hit “reply all,” [laughter] to send an email, telling everyone else to stop hitting “reply all.” [laughter]

No matter how high a bird flies, it still has to pass its poly [polygraph test]. [laughter]

You can’t squeeze blood from a turnip, but if the contracting officer says it’s in scope, we’ll try. [laughter]

Putting lipstick on a pig is an inherently governmental function. [laughter]

The early bird still gets stuck in traffic on I-66. [laughter]

Of all the depressing words of tongue or pen, the most depressing: “next slide please.” [laughter]

A watched pot never boils, but everyone will be watching when you’re in hot water. And speaking of “hot water,” tis better to remain silent and appear a fool than to say anything remotely interesting during Congressional testimony. [laughter]

One of my old favorites is, if you want a friend in Washington, get a dog. Now, it’s, if you want a friend in Washington, don’t bother. [laughter]

Since light travels faster than sound, many people in Washington appear bright until you hear them speak. [laughter and applause]

And finally, idle hands are the devil’s workshop, and so Sue Clapper is deeply concerned about what will happen in 248 days, but who’s counting? [laughter]

As I said, I was the NGA director back in 2003, which is the year we pushed through the name change from NIMA [the National Imaging and Mapping Agency] to NGA [the National Geospatial-Intelligence Agency]. It was obvious to me that what we were doing was “geospatial intelligence,” not merely “imaging and mapping.” That’s the GEOINT tradition, of understanding the earth – its natural and man-made features – gaining secrets, drawing inferences, and producing useful intell in a context that helps minimize uncertainty for our national decision-makers.

That was built on the foundational work of the first NIMA employees in 1996, and for that matter by the work of those who preceded them by DMA and NPIC. So as NGA gets ready to celebrate its twentieth anniversary, which is hard to believe, on Oct. 1, I thought today, it would be worth

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taking a look back at the world of 1996. When you get older, you remember things from way back then. I just can't remember anything about yesterday.

It was the year of the OJ Simpson civil trial. It was the year we caught the Unabomber, Ted Kaczynski, in his Montana cabin. It was the year of the Atlanta Olympics and the Centennial Olympic Park bombing, and of the Khobar Towers attack in Saudi Arabia.

In 1996, the Iraq disarmament crisis worsened, and in Northern Ireland, the IRA revoked the first ceasefire of The Troubles.

It was the year that Scottish scientists cloned Dolly the sheep and the year Nintendo released the N64 system and the Super Mario 64 game. And it was the year that the chess world champion, Garry Kasparov, first faced off against IBM's supercomputer Deep Blue.

So many events of 1996 seem to echo in 2016. Once again terrorist attacks confront us and reach into the Western world. Science and technology breakthroughs fundamentally redefine our existence and make us in the IC [Intelligence Community] rethink both our vulnerabilities and the opportunities in front of us.

So, I'd like to focus on the event at the end of my list. That's specifically the "man versus machine" chess match. IBM created Deep Blue to showcase the brute-force power of supercomputing. Their machine could very quickly evaluate millions of possible chess positions and make its next move with the cold precision of an algorithmic choice.

IBM challenged Garry Kasparov to a classic match of six games, and in game one, on February 10, 1996, Deep Blue shocked the world by defeating the reigning world chess champ.

That was the only game Deep Blue won in 1996. Kasparov took the overall match with three wins and two draws in the following five games. So the IBM team went back to work on computing power and algorithms, and in the 1997 rematch, Deep Blue won, with two wins, one loss, and three draws.

Fast forward to this March. Twenty years and just a few weeks after Deep Blue won its first game, we saw a wholly different computing demonstration with a Google-engineered machine and the Chinese board game "Go." In 1996 Deep Blue was able to process all the possible chess moves to out-maneuver Kasparov.

"Go" is different. There are ten-to-the-ninetieth-power times as many possible positions in Go as there are atoms in the universe. So a computer cannot win at Go by brute force. Instead

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Alpha-Go taught itself to play, and in the process, it developed what Google's engineers have called, "an intuition" for the game.

This March, Google's "Alpha-Go" beat world champ Lee Sedol in four of five games. The biggest moment of the "best-of-five" match was Move 37 of Game two. The commentator, who was also a Go grandmaster, thought Alpha-Go had made a huge blunder, placing its piece far away from the action.

Lee Sedol took several minutes to try to understand the move, looking to capitalize on Alpha-Go's mistake. Eventually he recognized the brilliance – and what he termed the "beauty" – of the move, one that likely had never been played before, and not something a human would think to do. Lee Sedol had to leave the room for 15 minutes, simply to compose himself.

So we have left behind the world of 1996, the world in which our smartest computers put their speed and brute force behind algorithms written by their human programmers. Now we live in a world in which machines can learn from their own mistakes and can develop a "beautiful" intuition.

So what does this mean for us lowly humans, particularly those of us in the Intelligence Community, and what can we do to adapt to the onrush of technology so that we aren't left behind?

Those are particularly tough questions, as we face and seek to understand a world of unpredictable instability that's being driven, at least in part, by climate change, in which mega population centers will compete for ever-diminishing food and water resources, and governments will have an increasingly difficult time controlling their territories.

In the next few years, as many as two-thirds of the nations around the world are at risk, to one degree or another, for instability, in what I see as a subtle erosion of the nation-state system. And we'll have little to no warning of where or when a regime change or government collapse might happen.

So, what do we in the IC, and particularly those of us in this GEOINT community who seek to understand the earth, do?

Well, first of all, I believe we'll keep doing what we're doing right. We'll continue to make integration of the 17 I components more natural and fluid. In fact, hopefully my successor won't have to talk about integration; it'll just be the default. And GEOINT will continue to provide that

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foundation on which many other layers of knowledge will be overlaid.

But continued IC integration isn't a panacea. We have to think past the integration efforts that are ongoing now. One way we can do that is to think beyond the U.S. Intelligence Community when we talk about integration.

We'll have to make SCI [sensitive compartmented information] clearances more ubiquitous at the state and local level, for example, so that intell sharing benefits first responders, and particularly, the people on the front lines of the CT [counterterrorism] fight, which I think we'll be in a perpetual state of.

More access to intelligence will mean more SCI clearances outside what we now know as "the IC."

That in turn means, which is no news to you, that we need a much more responsive, much more agile clearance system than we have today, both for initially granting them and for maintaining and updating them. This is yet another reason why Continuous Evaluation, which I think is the hope of the future, will be critical.

And when it comes to our Commonwealth nations, it's my belief that we're going to just give up on the NOFORN thing and extend dual-citizenship privileges and responsibilities to our Five Eye partners whenever we find ourselves in each other's intelligence footprint. And being inclusive with the Commonwealth nations will bring the next concentric circle of allies even closer, into what are now thought of as second party relationships. So, we'll need to expand integration, engage, and bring state and locals and foreign partners closer.

Second, we need to stop fighting technology and instead put it to work for us. My National Counterintelligence Executive Bill Evanina recently told me about a problem our security folks came across. During a standard sweep of a new facility so that we could take possession, they discovered several wireless signals transmitting out into the world.

Well, that was kind of bothersome. So, they located the sources, and were relieved to discover the signals were not from foreign intelligence bugs placed in the facility. They came from vending machines trying to tell their distributer that they were empty. [laughter]

Apparently, vending machines "phoning home" for refills is a fairly common problem, one we now know to look for and mitigate.

That's just the tip of the famous "Internet of Things" we keep talking and hearing about. It has

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more than 10.3 billion endpoints, projected to grow to 29.5 billion by 2020, with a market of something like 1.7 trillion dollars.

This leads to several questions about how the internet of things affects us: Where are our weak points that we aren't thinking about? And how is our workforce going to be affected when even our clothes are connected? Or when doctors regularly prescribe wireless monitors for health conditions? Even now, I need a security waiver for my hearing aids, which have Bluetooth connectivity.

By the way, I don't do the Bluetooth thing. I've got too much input already. [laughter]

So we need to move past just defending ourselves from drink machines and hearing aids, which, by the way, is why we're now in the throes of attempting to establish an IC-wide policy on wireless, which is very controversial, I might add. It will have some governance, so there's some consistency across the enterprise in how we use and propagate wireless capability, but will allow latitude for technology to change, because inevitably it will.

And we need to look at the opportunities that technology provides us too. In March, I met with the heads of intelligence from each of the Commonwealth nations – we were in Canberra at the time – to talk about where we are headed. Dr. Paul Taloni gave us a fascinating talk on the state of technology and where it's going, and I'd like to borrow a little bit from Paul's presentation. He is the Director of Australia's Signals Intelligence Directorate. So he's their DIRNSA [director of NSA] equivalent.

Paul talked about sitting with his seven-year-old daughter and looking at the pictures of Pluto taken a few months ago when the New Horizons spacecraft made its flyby. The first image he showed her, and later showed us, was the now iconic first color image NASA placed online: a rusty brown planet with the shape of a white heart covering its lower-right quadrant. He asked his daughter what it was. She said, "just a photo of Pluto."

The successive shots were closer, with more-detailed views of the texture of the dwarf-planet's surface. The picture on his third slide showed sharp ridgelines and peaks on Pluto's surface, casting shadows into a vast valley, with the nitrogen atmosphere hanging in layers, heaped above the curve of the horizon. His daughter told him it was, "just the mountains on Pluto, with the air."

Then he showed her the best picture we'd had of Pluto from when he was seven. It was just a faint white dot among many white dots. And she said, "Wow, Dad. You're old." [laughter]

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I didn't bother to say anything at the time. When I was seven, that was just a few years after we'd *discovered* Pluto. [laughter]

His point was that, in just one generation between Paul and his daughter, technology had leapt from seeing Pluto as a faint dot, to visiting Pluto and sending back detailed color images. And by the way, with the recent announcement from NASA, we've confirmed observations of 3200 planets orbiting *other* stars, some that are 10 or 20 thousand light-years away.

We can look at that pace of technical innovation as a scary thing, something that could take away any advantage the U.S. Intelligence Community has now; or see it as something that will utterly revolutionize our lives for the better, and something we in the Intelligence Community can, and I am confident will, take advantage of, because as we've gotten better at seeing what's "out there," we've also improved our ability to look down and to better understand the planet we live on.

That leads me to something Robert said yesterday that really struck me. He was explaining NGA's new strategy and defining some of the terms NGA and the IC are using to describe our new ways of doing business.

He talked about "Object Based Production" – organizing intelligence around what we're studying: a person, place, or thing; rather than around the collection system that gave us the data or image.

He described a "Structured Observation Management" framework – capturing and storing data in a structured way, so that we rely on the technology to find and connect intelligence, rather than on the memory of the analyst who entered it into the system.

And finally, he discussed using "Object Based Production" and "Structured Observation Management" to build "Activity Based Intelligence," the state in which, instead of interpreting an image we understand what's happening with the person, place, or thing that we're studying and how that activity changes with time.

Yesterday, in the midst of explaining these concepts, Robert said something that I thought was striking. He said, "We'll move from *imaging* a small percentage of the earth each day, to *sensing* all of it." When we reach that vision, and I believe we will soon, that will mark an amazing journey that NGA and the GEOINT community have made since 1996.

And geospatial intelligence, which was a gleam in our eye, will truly have transcended imaging

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and mapping, far beyond anything we thought about, or at least that I thought about in 2003 when we simply changed the agency's name; which at the time we saw as a "Big Deal," but it was just one milestone in the constant evolution of the Intelligence Community.

It won't be easy, but achieving the vision Robert laid out is, I think, critical to our nation, because despite all this technological change, there's one thing that hasn't changed in the 20 years NGA and NIMA have been around. In fact, it hasn't changed in my 55 years of service, including about 53 or so in the intelligence business. It's something I believe won't change fundamentally in the future. And that's the basic reason: why we do intelligence in the first place.

The past few years, our nation has held a very public conversation about the Intelligence Community and what it does. And I think a lot of what has been lost in the public debate about how we conduct intelligence is why we even do it in the first place. Why does any nation-state conduct intelligence?

We do, mainly I think at its most basic level, to reduce uncertainty for decision makers. That can be anyone, from the President in an Oval Office to a private in an oval-shaped foxhole, if I can stretch the metaphor there. We can't eliminate uncertainty for any of them, from the President to the private, but we can provide insight and analysis to help their understanding and to make uncertainty at least manageable, so that our national-security decision makers can make educated decisions with an understanding of the risk involved, and so that we and our friends and allies operate on a shared understanding of the facts and the situation.

So I believe that in this time of change, when we don't know who "Intell Customer Number One" [the President] will be a year from now when we hold GEOINT 2017, what our national priorities will be, and what challenges we'll face next, if we keep the truth in front of us of why we do intelligence, our unique accesses and insight will continue to help our national leaders manage the inevitable uncertainty for a long time to come.

Watch the Video